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PREHISTORIC WORKSHOPS AT MT. KINEO, MAINE.

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THE porphyritic felsite of Mt. Kineo, Moosehead Lake, was one of the chief minerals used for the manufacture of chipped implements by the tribes of central and southern Maine. Chips and broken implements of this stone were found in nearly all of the camp sites and shell heaps which I have examined in that state. The oldest New England people of whom we have knowledge, and whose art remains were taken from the very ancient graves explored by me in Hancock County, Maine, in 1892-94, used knives of this mineral.

Although erratic boulders of this stone furnished a limited supply of material, the chief source was the great cliff of Kineo. The southern side of this mountain is a mile or more in length and rises nearly perpendicularly to a height of several hundred feet. Its opposite side slopes gradually to the wooded plain forming the northern portion of the peninsula.

In connection with other archæological work in Maine carried on under the auspices of the Peabody Museum of Harvard University, the writer made two visits to Mt. Kineo, for the purpose of locating Indian workshops and learning the manner in which the rock was quarried or otherwise obtained.

The talus slope at the foot of the great cliff of Kineo (Fig. 1, *a*) is from two hundred to three hundred feet in width and extends the entire length of the mountain. Patches of evergreens interspersed with deciduous trees are growing near its base, but its surface is practically free from soil. The slope of the talus is composed of comparatively small fragments

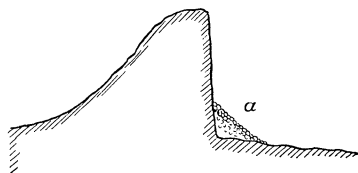


FIG. 1. — Sketch showing approximate cross-section of Mt. Kineo; *a*, talus slope.

intermixed with larger masses of the rock. This talus is constantly forming, and the colored patches along the face of the cliff mark the places from which masses of felsite have recently fallen, which are shattered as they strike the rocks below, and the larger pieces rolling down the slope are chipped and broken into innumerable forms. The recently fractured pieces are easily distinguished from those which have been long exposed to the action of the atmosphere. The fresh fracture presents a green surface sprinkled with small dots and squares of gray feldspar crystals. Upon long exposure the surface becomes a uniform dirty gray. Upon this slope one can gather bushels of chips, flakes, and pseudo-implements wholly the work of nature, which, if placed unlabeled on the shelves of a museum, would be accepted without question as the work of man. For comparison a series of these natural forms is shown with an equal number from Indian workshops at a distance

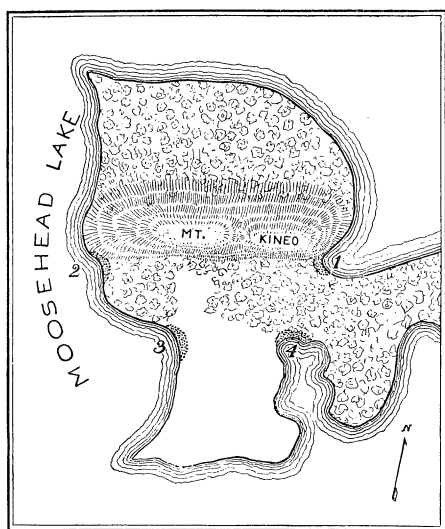


FIG. 2. — Sketch map of Mt. Kineo and vicinity, showing location of Indian workshops.

from the mountain. In selecting the natural

forms care was taken to include only those lying on the surface near the top of the talus and having the green color indicating freshly fractured stone. Only a few of the many examples collected are shown. The natural forms are illustrated on Pl. I, *g* to *l*. The artificial forms from the workshops are shown upon the same plate, *a* to *f*. Typical artificial chips showing the "bulb of percussion" are seen in *e* and *f*, while *k* and *l* show natural chips having corresponding bulbs. These "bulbs of percussion" are generally accepted as conclusive evidence of the artificial origin of such flakes.

At points at the lower edge of the talus slope and in several places on the low peninsula south of the mountain were indications of former occupancy by the Indians. Chips and rejectage occurred in many places, but the principal workshops were located at the points indicated upon the sketch map (Fig. 2). Workshops 1 and 2, near the eastern and western ends of the cliff, were evidently the principal blocking-out shops. These, being near the water, had unfortunately been disturbed and partially destroyed by the waters raised by damming. A large amount of chips and general shop refuse was found at the eastern shop (1). Large discarded worked nodules lay in beds of chips. Ashes and charcoal occurred at intervals. A few hammer stones were found, all of felsite. The rejectage of this shop indicated principally the production of large implements. Very few nearly completed implements were found.

Workshops 3 and 4 differed principally from those at the foot of the talus in the size of the rejectage. Both had been somewhat disturbed by the damming of the outlet of the lake and the consequent washing away of portions of the shore. Workshop 4 had been nearly obliterated, but the abundance of refuse along the beach showed the types of implements manufactured there. In both these workshops medium and small "turtlebacks" predominated.

The ruder forms of rejects collected from the different workshops are illustrated upon Pl. II, *a* to *e*. These occurred in great abundance, the larger examples being nearly all from the shops at the foot of the talus slope. Types of the secondary forms are shown on Pl. III, *e* to *h*. These were much less abundant than the ruder forms. The largest specimen, *e*, measuring eighteen inches in length, was found by Mr. L. L. Hubbard in workshop 3, and presented by him to the Peabody Museum.

Comparatively few implements broken in the last stages of formation were found. The lengths of the perfect examples of which these were a part would range from about three inches to ten inches. Unbroken finished or nearly finished implements were very rare. They were of the types shown upon Pl. III, *a* to *d*.

I could find no evidence that the rock used was detached from the main mass by the Indians. The material was evidently taken from the talus, fractured pieces being selected of the size and form most readily chipped into the implement desired.

That most of the products of the Kineo workshops were intended for transportation and to be finished at a distance is evident not only from the workshop refuse itself but from the chips and more highly specialized forms of this material, both broken and perfect, which are found in nearly all the burial places, village and camp sites which I have examined in central and southern Maine. Small chips of Kineo felsite are very abundant in nearly all the village sites in the valleys of the Kennebec and Penobscot rivers and their tributaries, and also in the camp sites and shell heaps of the inlets, smaller rivers, and islands along the coast between these rivers, and for some distance east of the Penobscot and west of the Kennebec. The broken or discarded implements found in company with the chips in these places are more commonly small knives and projectile points of various forms, together with scrapers and perforators, types common in most prehistoric Indian village sites, but absent or only occasionally found at the Kineo workshops.

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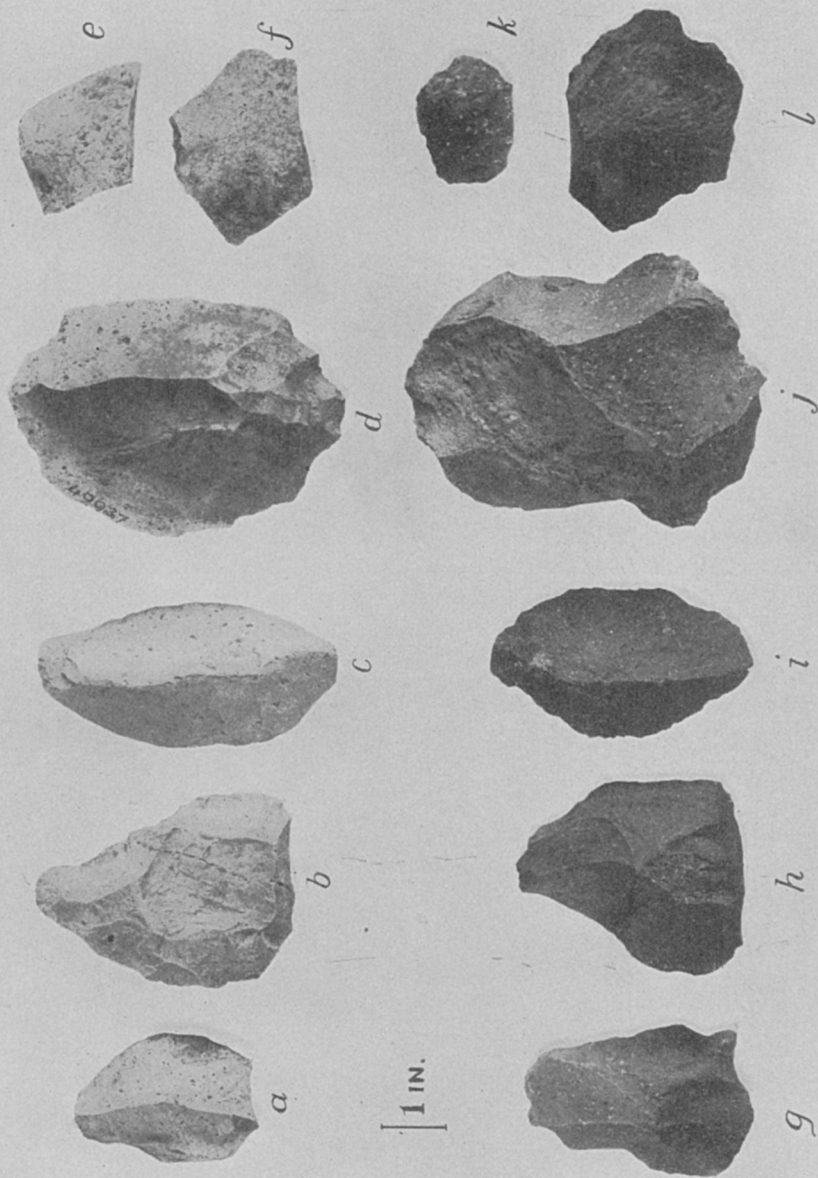


PLATE I. — *a-k*, typical rejects and chips from Indian workshops, Mt. Kineo, Maine.
g-l, natural forms from the talus.

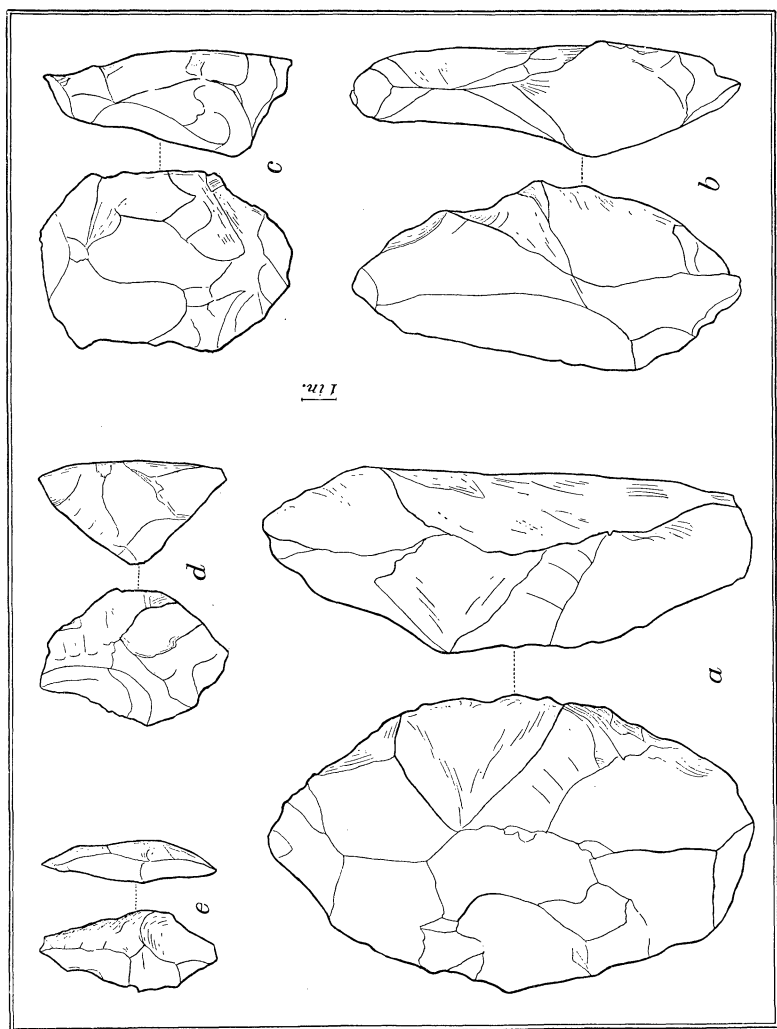


PLATE II. — Chipped nodules (rejects) from Indian workshops, Mt. Kineo, Maine.

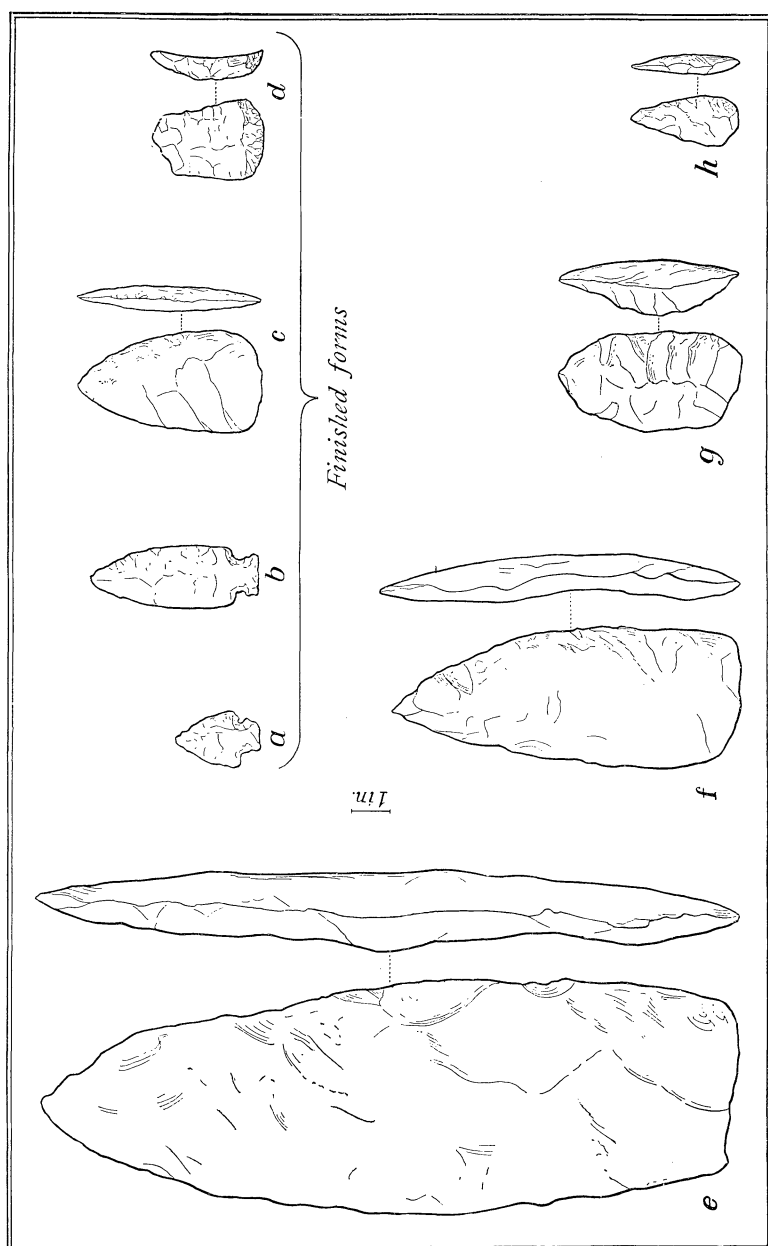


PLATE III. — Secondary forms (rejects) and finished implements from Indian workshops, Mt. Kinco, Maine.